Configuration of a Clinical Pathway Charting System for an On-Line Clinical Information System

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The authors devised a way to configure clinical pathways into an Integrated Care Planning (ICP) subsystem in a standard clinical information system (CareVue 9000 CIS (Hewlett-Packard Co., Andover, MA). The pathways are displayed graphically on screen and accept the documentation required to chart a patient's clinical course. Configuration of clinical pathways required transposition of pathway terms for the ones used for standard ICP configuration. However, the configured pathways are displayed properly on screen for data entry and for archival printed reports.

OVERVIEW: Clinical pathways offer a multidisciplinary method of standardizing "best practices" from both nursing and physician viewpoints. Once created, pathways need to be integrated into the standard nursing documentation process and should be readily available to physicians and other caregivers. Although clinical pathways have not been directly supported in the most CIS software, we found a way to configure pathways into a standard CareVue CIS. This resulted in on-screen pathways which allow the patient's course to be charted directly on the pathway. Exceptions to pathway management and guidelines can be noted along with clinical goals which are either met or not met. The CIS software automatically builds a highly readable progress note for permanent documentation, as well as a pathway report. Compliance with pathways and guidelines can be automatically audited by exporting the charted data and tabulating exceptions to the expected clinical course.

METHODS: CareVue configuration is performed in a "Configuration Test Environment" (CTE) which allows for screens and reports to

be tested without disturbing the configuration used for routine patients. To configure clinical pathways into the CareVue ICP, the pathways have to be named as a specific "standard of care" type of care plan. Then the named pathway can be expanded with categories of care and specific standards or guidelines. In the configurator, the names of items requested for ICP configuration need to be transposed as Pathway item names (Table).

Table: Transposition of Pathway and ICP Item Names

Pathway Item	Iteı	n in ICP Configuration
Pathway name	>	Care Plan
Category of care	>	Problem
Care Activity	>	Outcome
Guideline	>	Orders

Next, categories of care activities such as level of care, medications, treatments, nutrition, education and outcomes are configured as ICP "Problems". The specific care activities or goals for each category of care are configured as ICP "Outcomes". The configured pathway is fully functional for charting or review (Figure).

and and	Problems	Pac 29 95	Mar 30 95	Mar 31 95	HOCONET
Obles	CRANIOTOMY W/O TRAUNA	Pathway Day 1	Pathway Day 2	Pathway Day 3 (Floor Care)	
ders obles	CARE OF	ICU -Met Operating Room	eat - Quideline for Transfer from ICD to Floor		
dars			icu		
oblem 3	3 DK TRETE / PROCEDURES	CBC -Mat	CBC		
ders obles	PROCESSION	Ches 1 -Het	CT W/G contrest		
derm		Heuro checks q1 -2h -Not Met	Chem 1		
obles		Record 1/D	Neuro checke q1-2h		
dern		VU qih	Record 1/0		
obless 6			V# glh		
oblex	4 MEDICATIONS	Analgesia -Not Not	Antacids		
ders		Antacids -Mat	Anticonvulsants		
oblas		Antibiotics x 24h	IV Fluids		
ders		Anticonvuleentm -Mat	Pain Menagament		
oblam 9		Steroids	Steroide		
ders meido	5 TREATMENTS	SCDs bilsterelly	#CDs and/or TEDs bilet when in bed, remove 4 reapply u whift		

Figure: On-Line Clinical Pathway